SONY

Video Cassette Recorder

Operating Instructions

VHS PAL

Hi-Fi

Hi8

VIDEOPlus+

SLV-T2000UX

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Notice for customers in the United Kingdom and Republic of Ireland

A moulded plug complying with BS1363 is fitted to this equipment for your safety and convenience.
If the 13A fitted plug does not match the outlet socket in your home, please refer to your Appointed Sony Dealer for advice.

Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS1362, (i.e., marked with ⓐ or ⓑ mark) must be used.
If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

Precautions

Safety

- This unit operates on 220 – 240 V AC, 50 Hz. Check that the unit's operating voltage is identical with your local power supply.
- If anything falls into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- The unit is not disconnected from the mains as long as it is connected to the mains outlet, even if the unit itself has been turned off.
- Unplug the unit from the wall outlet if you do not intend to use it for an extended period of time. To disconnect the cord, pull it out by the plug, never by the cord.

Installing

- Allow adequate air circulation to prevent internal heat buildup.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Do not install the unit in an inclined position. It is designed to be operated in a horizontal position only.
- Keep the unit and cassettes away from equipment with strong magnets, such as microwave ovens or large loudspeakers.
- Do not place heavy objects on the unit.
- If the unit is brought directly from a cold to a warm location, moisture may condense inside the VCR and cause damage to the video head and tape. When you first install the unit, or when you move it from a cold to a warm location, wait for about one hour before operating the unit.

Caution

Television programmes, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission may require authorization from the cable television transmitter and/or programme owner.

Colour system

This VCR is designed to record and playback using the PAL colour system. Recording of video sources based on other colour systems cannot be guaranteed.

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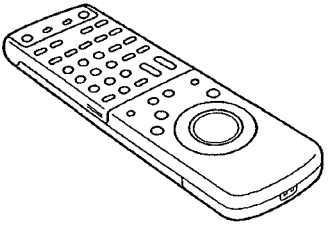
* VIDEO Plus+ and PlusCode are Trademarks of Gemstar Development Corp. VIDEO Plus+ system is manufactured under license from Gemstar Development Corporation.

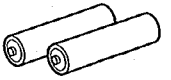
Step 1
Unpacking

Check that you have received the following items with the VCR:

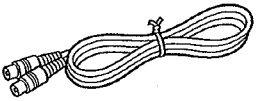
- Remote commander



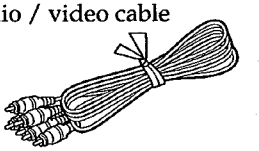
- R6 (size AA) batteries



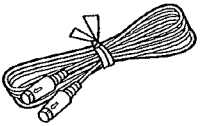
- Aerial cable



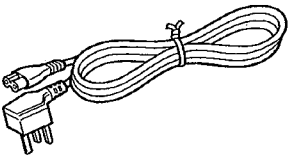
- Audio / video cable



- S-video cable



- Mains lead



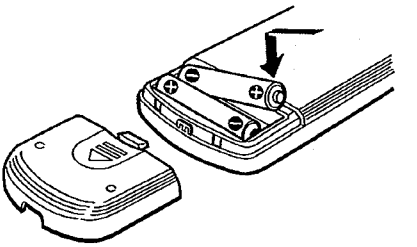
- LINE IN jack cover

Step 2

Setting up the remote commander

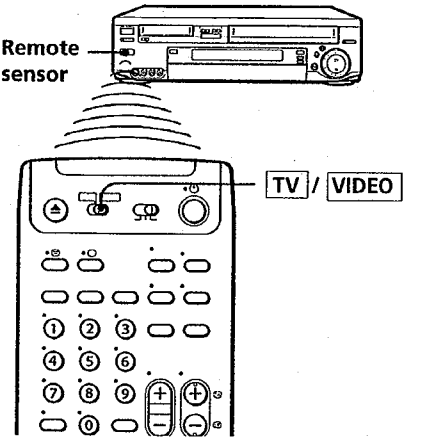
Inserting the batteries

Insert two R6 (size AA) batteries by matching the + and – on the batteries to the diagram inside the battery compartment.



Using the remote commander

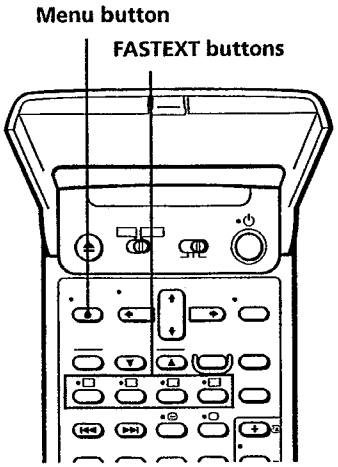
You can use this remote commander to operate this VCR and a Sony TV. Buttons on the remote commander marked with a dot (•) can be used to operate your Sony TV.

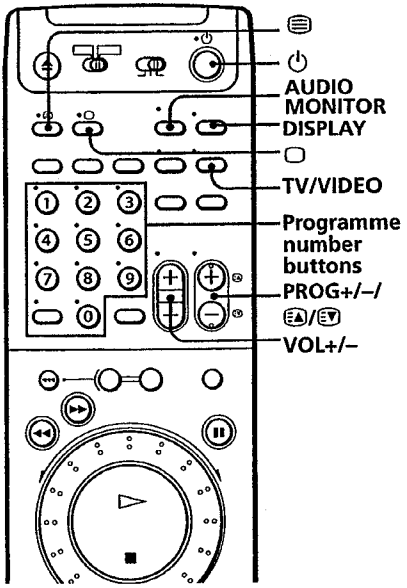


To operate	Set TV / VIDEO to
the VCR	VIDEO and point at the remote sensor on the VCR
a Sony TV	TV and point at the remote sensor on the TV

continued

Step 2 : Setting up the remote commander (continued)





TV control buttons

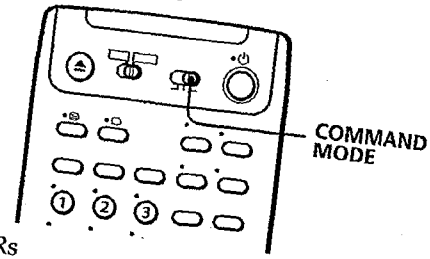
To	Press
Turn the TV into standby or active mode	⏻ (on/standby)
Select an input source of the TV either from aerial in or from line in	TV/VIDEO
Select the programme position of the TV	Programme number buttons PROG +/–
Adjust the volume of the TV	VOL +/–
Switch to TV (Teletext off)	▢ (TV)
Switch to Teletext	▤ (Teletext)
Select the sound	AUDIO MONITOR
Use FASTEXT	FASTEXT buttons
Call up on-screen display	DISPLAY
Change the Teletext page	▤▲/▤▼
Operate TV menu options	Menu button

Notes

- With normal use, the batteries should last about three to six months.
- If you do not use the remote commander for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- Do not use a new battery with an old one.
- Do not use different types of batteries.

Setting the COMMAND MODE switch

To remotely control the Sony VCR with this remote commander, set COMMAND MODE on the remote commander to the same position as that on the VCR. Usually set to VTR 3. Change the position as shown below to control other Sony VCRs:



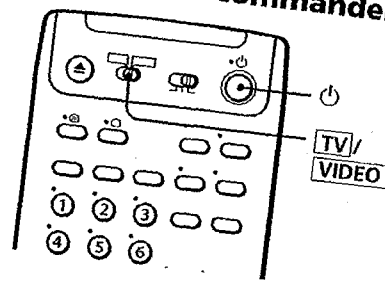
VTR 1: For Sony Betamax format VCRs

VTR 2: For Sony 8mm format VCRs

VTR 3: For Sony VHS format VCRs

Controlling other TVs with the remote commander

The remote commander is preprogrammed to control non-Sony TVs. If your TV is listed in the table on the next page, set the appropriate manufacturer's code number.



1 Set TV/VIDEO at the top of the remote commander to TV.

2 Hold down ⏻, and enter your TV's code number(s) using the number buttons. Then release ⏻.

Now you can use the following TV control buttons to control your TV: ⏻ (on/standby), TV/VIDEO, programme number buttons, PROG +/–, VOL +/–, 🖵 (TV), ▤ (Teletext), FASTEXT buttons and WIDE with some TVs.

continued

Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

To make wide mode settings, see the footnotes below this table for the applicable code numbers.

Manufacturer	Code number
Sony	01*1, 02, 03, 04, 05
Aiwa	32
Akai	68
Blaupunkt	10, 21
Brionvega	40
C.G.M	09
Colonad	03
Dual	44
Emerson	03, 04
Fenner	30, 31
Ferguson	52
Gold Star	03, 04, 17
Grundig	10*1, 11*1
Hitachi	24
Hyper	31
Inno-Hit	41
Irradio	20
ITT	15, 16, 69*3
JVC	33*1
Loewe	45
Mitsubishi	27*1, 28*1, 50*1, 51*1
Mivar	09

Manufacturer	Code number
NEC	66
Nokia	15, 16, 69*3
Nordmende	35, 42
Orion	47, 48
Panasonic	17*1, 49
Philips	06*1, 07*1, 08*1
Phonola	18, 19
Pioneer	26
Saba	12, 13
Samsung	22, 23
Sanyo	25
Schneider	46
Seleco	14
Sharp	29
Siemens	39
Sinudyne	37
TEAC	67
Telefunken	36
Thomson	43*2
Toshiba	38
White Westinghouse	34

*1 Press WIDE to switch the wide picture mode on or off.

*2 Press WIDE, then press VOL +/– to select the wide picture mode you want.

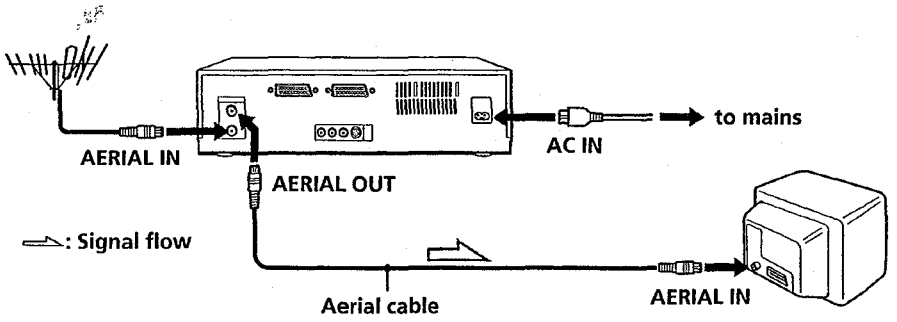
*3 Press WIDE. The menu appears on the TV screen. Then, press CURSOR ↑/↓/←/→ to select the wide picture you want and press EXECUTE.

Notes

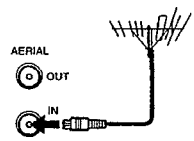
- If the TV uses a different remote control system from the one programmed to work with the VCR, you cannot control your TV with the remote commander.
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote commander, the code number automatically resets to 01 (Sony). Reset the appropriate code number.

Step 3

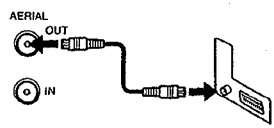
Connecting the VCR



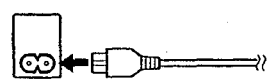
1 Disconnect the aerial cable from your TV and connect it to AERIAL IN on the rear panel of the VCR.



2 Connect AERIAL OUT of the VCR and the aerial input of your TV using the supplied aerial cable.



3 Connect AC IN of the VCR to the mains using the supplied mains lead.

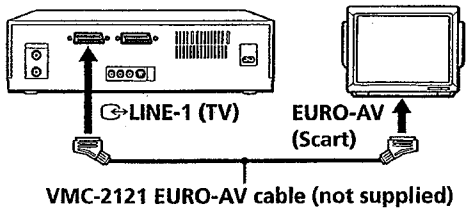


continued

Additional connections

To a TV that has a EURO-AV (Scart) connector

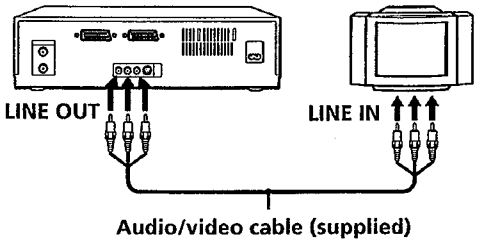
This additional connection improves picture and sound quality. Connect the TV as shown on the right. Whenever you want to watch the VCR picture, press TV/VIDEO on the remote commander (or TV/VTR on the VCR) to display the VTR indicator in the display window. When you connect using the EURO-AV cable, set the RF MODULATOR option in the SET UP MENU to OFF. (page 50)



Notes

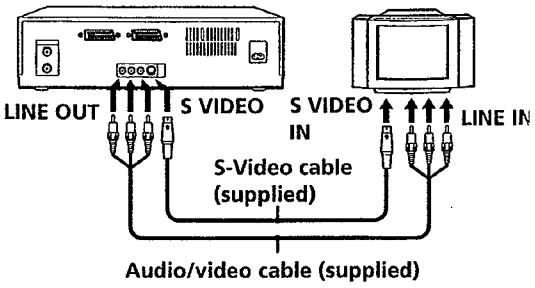
- If your TV has a EURO-AV connector, set the LINE 1 VIDEO OUT menu option to NORM. This hookup allows you to display subtitles, but the VCR does not transmit Y/C signals.
- If your TV has a EURO-AV connector and is S-VIDEO compatible, set the LINE 1 VIDEO OUT menu option to S. This hookup does not allow you to display subtitles, and some TVs may only display a black-and-white screen. If this is the case, set the TV to S-VIDEO input.

To a TV that has an audio/video connector



To a TV that has an S-VIDEO connector

The S-VIDEO connection in addition to the audio / video connection can improve picture quality.

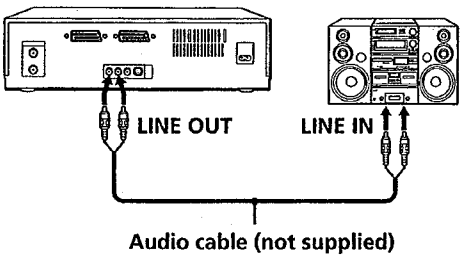


Note

If your TV has an S-VIDEO / VIDEO selector switch, set this to the S-VIDEO position to view the picture from the S-VIDEO connector.

To a stereo system

You can improve sound quality by connecting a stereo system as shown on the right.

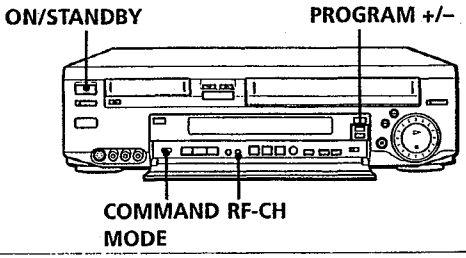


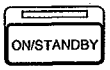
Step 4

Tuning your TV to the VCR

If you have connected your VCR to the TV using the EURO-AV cable, skip this step.

Make sure to match the COMMAND MODE of the VCR and the remote commander. This VCR and remote commander are set to VTR3 at the factory.



1 

Press ON/STANDBY to turn on the VCR.

2
RF-CH

Press RF-CH on the VCR.

The factory-preset RF channel appears in the display window.

The VCR signal is output through this channel to the TV.

3

Turn on your TV and select a programme position for the VCR picture.

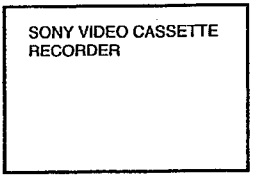
This channel will now be referred to as the video channel.

4

Tune the TV to the same channel as that shown in the display window so that the picture on the right appears on the TV screen.

Refer to your TV manual for tuning instructions.

If the picture does not appear clearly, see "To obtain a clear picture from the VCR" on the next page.



5

Press RF-CH.

You have now tuned your TV to the VCR. From now on, whenever you want to play a tape, set the TV to the video channel.

To check to see if the TV tuning is correct

Set the TV to the video channel and press PROGRAM +/– on the VCR. If the TV screen changes to a different programme each time you press PROGRAM +/–, the TV tuning is correct.

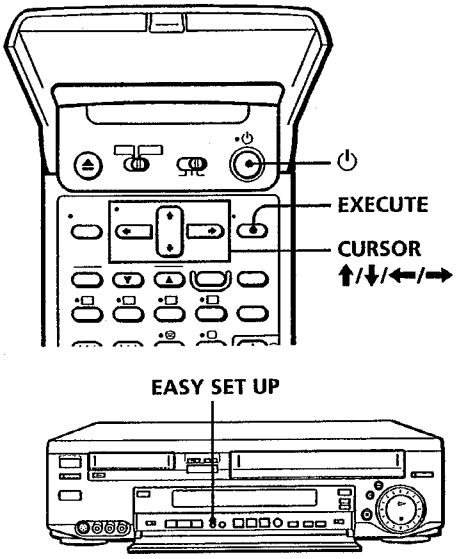
To obtain a clear picture from the VCR

If the picture does not appear clearly in step 4 above, press PROGRAM +/– in step 4, so that another RF channel appears. Then tune the TV to the new RF channel until a clear picture appears.

Step 5

Setting up the VCR with EASY SET UP

Before using the VCR for the first time, set up the VCR using the EASY SET UP function. With this function, you can set the language for the on-screen display, TV channels, guide channels for VIDEO Plus+, and the VCR clock, guided by the sequence indicated on the TV screen.



1

Press ⏻ to turn on the VCR.

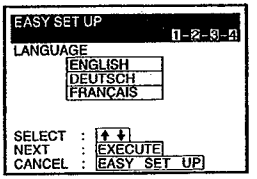
2

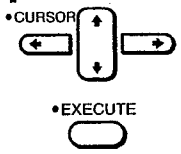
Turn on your TV and set it to the video channel.

3

Press EASY SET UP on the VCR.

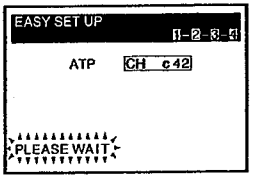
To cancel the EASY SET UP function, press EASY SET UP again.



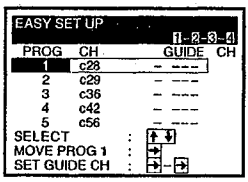
4 

Press CURSOR ↑/↓ to highlight the desired language, then press EXECUTE.

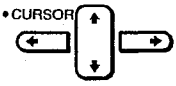
ATP starts searching for all the receivable channels and sorts the located channels.



When all the channels are preset, the following screen appears.



5



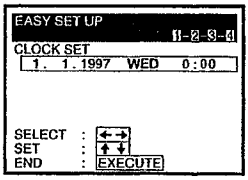
Using CURSOR ↑/↓/←/→, set VIDEO Plus+ guide channels and change the programme positions. (If not necessary, skip this step.)

The setting procedures are the same as those described in "Manual setup — Setting up VIDEO Plus+" on page 21 and "Manual setup — Changing programme positions" on page 25.

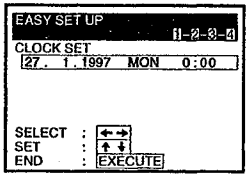
6

Press EXECUTE.

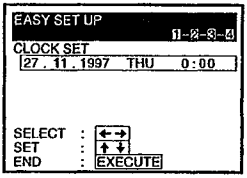
The following screen appears.



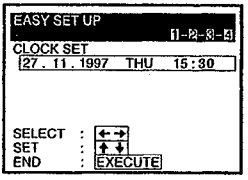
❶ Press CURSOR ↑/↓ to set the day. The day of the week is set automatically.



❷ Press CURSOR → to highlight the month and set the month using CURSOR ↑/↓.



❸ Set the year, hour and minutes in sequence, using CURSOR → to highlight the item to be set, and CURSOR ↑/↓ to select the digits.

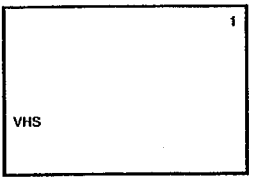


continued

7 •EXECUTE

Press EXECUTE .

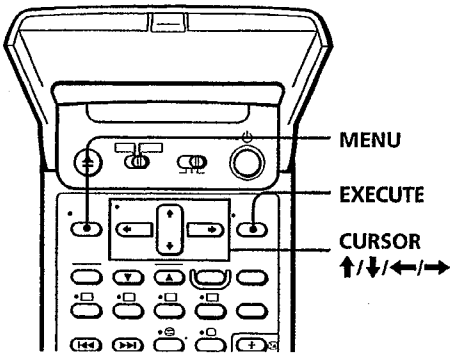
A programme position appears on the TV screen.



Note

- Do not exit EASY SET UP while the VCR is presetting channels. If you do, repeat EASY SET UP from the beginning.

Manual setup — Selecting a language

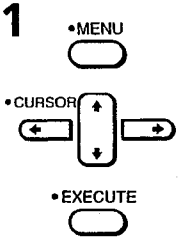


You can change the on-screen display language from the one you selected with EASY SET UP.

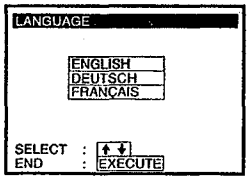
Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.

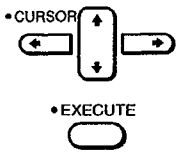
1



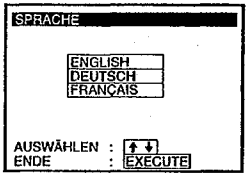
Press MENU, then press CURSOR ↑/↓ to move the cursor (I) to LANGUAGE and press EXECUTE.



2



Press CURSOR ↑/↓ to highlight the desired language, then press EXECUTE.

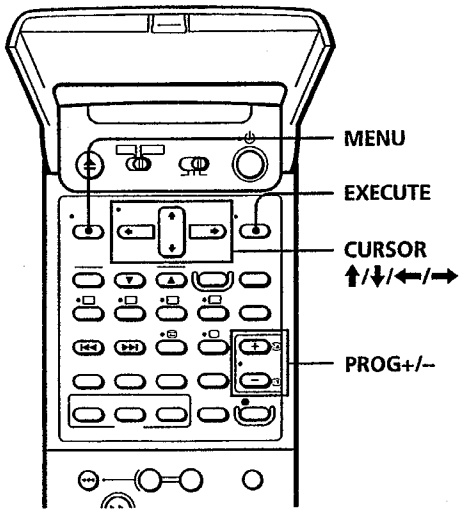


Manual setup — Presetting channels

If some channels could not be preset using EASY SET UP, you can preset them manually.

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.

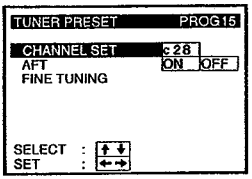


1 •MENU

•CURSOR

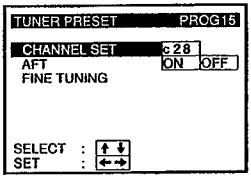
•EXECUTE

Press MENU, then press CURSOR ↑/↓ to move the cursor (I) to TUNER PRESET and press EXECUTE.



2 •CURSOR

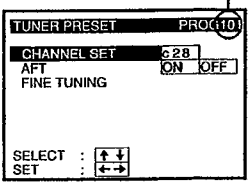
Press CURSOR ↑/↓ to move the cursor (I) to CHANNEL SET.



3 •PROG

Press PROG +/– to select the programme position.

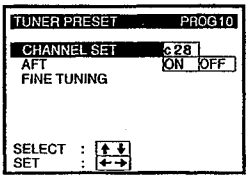
Selected programme position



4

•CURSOR

Press CURSOR ➡ to start tuning.



The VCR starts searching for a channel and displays the first one it finds on the TV screen. Press CURSOR ⬅/➡ repeatedly until the channel you want is displayed.

The channels are scanned from UHF B21 to B69.

If you know the number of the channel you want, press the programme number buttons. For example, for channel 43, first press "4" and then press "3."

5

To allocate another channel to another programme position, repeat steps 3 and 4.

6 •EXECUTE

Press EXECUTE.

continued

Disabling unwanted programme positions

After tuning the TV channels, you can disable unused programme positions. The disabled positions will be skipped later when you press the PROG +/– buttons.

1 In step 4 on the previous page, press programme number button "0" twice to display the number "0" beside CHANNEL SET.

2 Press EXECUTE.

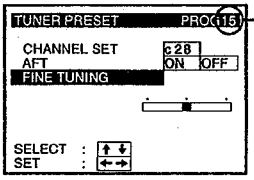
If the picture is not clear

Normally, the Auto Fine Tuning (AFT) function automatically tunes in channels clearly. If, however, the picture is not clear, you may also use the manual tuning function.

1 Press PROG +/– to select the programme number for which you cannot obtain a clear picture.

2 Press MENU, then select TUNER PRESET and press EXECUTE.

3 Select FINE TUNING. The fine tuning meter appears.



Selected programme position

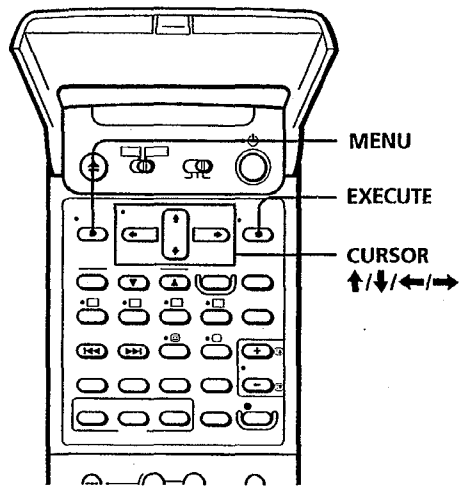
4 Press CURSOR ←/→ to get a clearer picture, then press EXECUTE.

Note that the AFT (Auto Fine Tuning) setting switches to OFF.

Note

- The menu disappears automatically if you don't proceed for more than a few minutes.

Manual setup — Setting up VIDEO Plus+



VIDEO Plus+ is a feature in Sony VCRs that simplifies programming the VCR to make timer recordings. To use VIDEO Plus+, each programme position needs to be matched with its VIDEO Plus+ guide channel. If the guide channels were not preset in the EASY SET UP procedure, you need to set them manually. To get the guide channel numbers, see "Guide channels for VIDEO Plus+" on page 23, or look in the programme guide for your area that features PlusCode.

- If you want to record satellite broadcasts using VIDEO Plus+, see page 24.

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.

1 •MENU

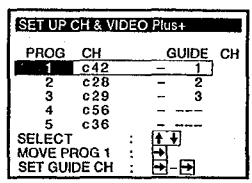
•CURSOR

•EXECUTE

Press MENU, then press CURSOR ↑/↓ to move the cursor (I) to SET UP CH & VIDEO Plus+ and press EXECUTE.

When using the EASY SET UP procedure, skip this step.

The preset channels are displayed on the screen. The guide channels also appear if the VCR detected them in EASY SET UP. "---" in the GUIDE CH column means that the guide channel has not been preset.



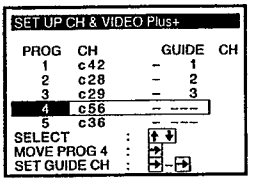
continued

2

•CURSOR

Press CURSOR ↑/↓ to move the cursor (I) to the row on which you want to set the guide channel.

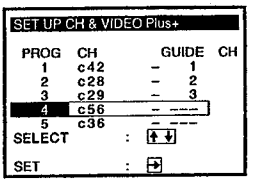
To display other pages for programme positions 6 to 60, press CURSOR ↑/↓ repeatedly.



3

•CURSOR

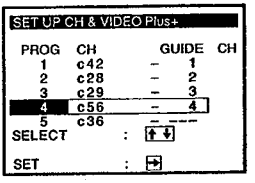
Press CURSOR → twice to highlight the guide channel column.



4

•CURSOR

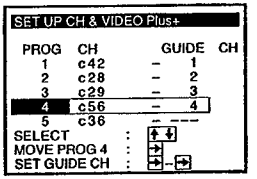
Press CURSOR ↑/↓ to select the guide channel number assigned in the programme guide.



5

•CURSOR

Press CURSOR → to confirm the setting.



6

To set the guide channel of another station, repeat steps 2 to 5.

If you want to change the programme positions of the stations, proceed to step 2 of "Manual setup — Changing programme positions" on page 25.

7 •EXECUTE

Press EXECUTE.

Guide channels for VIDEO Plus+

Guide channel	Station name
001	BBC1
002	BBC2
003	ITV
004	CHANNEL 4
005	CH5
006	RTE (IRELAND)
007	NETWORK 2 (IRELAND)
101	SKY ONE
102	SKY NEWS
103	SKY MOVIES
104	THE MOVIE CHANNEL
105	SKY SPORT
106	NICKELODEON
	/PARAMOUNT CHANNEL
107	EUROSPORT/QUANTUM TV
108	WARNER BROTHERS
109	MTV EUROPE
110	CHILDREN'S CHANNEL
	THE FAMILY CHANNEL
111	THE DISNEY CHANNEL
112	BBC WORLD SERVICE
113	RTL 4
114	FILMNET 2, SUPER SPORT,
	ADULT CHAN
115	RTL PLUS INTERNATIONAL
116	SAT 1
117	PREMIERE
118	3 SAT
119	SKY2, FOX KIDS
120	PRO 7
121	TELE 5
122	TELECLUB
123	UK GOLD
124	DISCOVERY
	THE LEARNING CHANNEL
	REGAL SHOP
125	BRAVO
	ADULT CHANNEL
	EUROPEAN BUSINESS NEWS
	PLAYBOY
126	CNN
127	EURONEWS
128	PERFORMANCE
	THE ARTS CHANNEL
129	SKY MOVIES GOLD, WEATHER
130	UK LIVING
	TV-X
131	GRANADA +
132	GRANADA TALK, SKY SCOTTISH
133	TV5 EUROPE
134	TVE INTERNATIONAL
135	MBC/ARABIC
136	VTM
137	SPORTNET
138	COUNTRY MUSIC TV
140	SKY SPORT 2 & SOAPS &
	TRAVEL
	THE HISTORY CHANNEL
	SCI-FI CHANNEL
	SKY SPORT GOLD
141	TV ASIA
142	GRANADA GOOD LIFE
	GRANADA TV HIGH STREET
	GRANADA FOOD + WINE
	GRANADA HEALTH AND
	BEAUTY
	GRANADA HOME + GARDEN
143	LIVE TV
144	SUPERCHANNEL
145	VIDEO HITS ONE, VH-1
146	SELECT TV
147	FILMNET 1
148	SKY SPORT 3
149	TNT
	CARTOON NETWORK

Note

- The guide channel codes listed above are as of 1 February 1997. If you have any questions about the guide channels, please consult your nearest Sony service facility or the marketing group of Sony UK.

continued

Setting up VIDEO Plus+ for satellite broadcasts

When your satellite tuner is connected via the AERIAL IN connector, first you have to set the programme position for each satellite channel using the TUNER PRESET menu. Then set the guide channel number for each satellite channel using the SET UP CH & VIDEO Plus+ menu.

If your satellite tuner is connected via the LINE-3 IN connector, you don't have to set programme positions nor guide channel numbers for satellite channels. Skip the following operations.

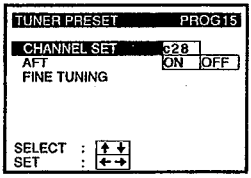
1 Turn on the satellite tuner.

2 Press MENU, then select TUNER PRESET and press EXECUTE.

3 Press PROG +/– to select a programme position you want to use for watching a satellite channel.

4 Select CHANNEL SET, then press CURSOR → to tune the VCR to the satellite tuner.

The channel number displayed beside CHANNEL SET is used for receiving all satellite broadcasts from the satellite tuner.



5 Press PROG +/– to select another programme position for another satellite channel, and press the programme number buttons to enter the same channel number as the one displayed in step 4.

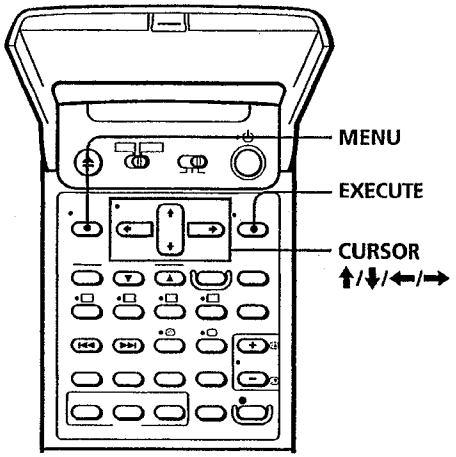
Repeat this step for all satellite channels.

6 Set the guide channel number for each programme position assigned to the satellite channel, following the procedures in "Manual setup — Setting up VIDEO Plus+" on page 21.

Notes

- The menu disappears automatically if you don't proceed for more than a few minutes.
- If you use a satellite tuner connected via the LINE-3 IN connector, you don't have to set up VIDEO Plus+. Just record a satellite programme using VIDEO Plus+, and the VCR automatically records the programme from the LINE-3 IN connector.
- If you inadvertently entered a guide channel number, press CURSOR ↑/↓ repeatedly to reset the "GUIDE CH" column to "---." "---" appears between 1 and 255.
- The VCR does not allow entering the guide channel number, if the same number has been set.
- When you record a satellite broadcast using VIDEO Plus+, you need to select the desired channel on the satellite tuner manually.

Manual setup — Changing programme positions



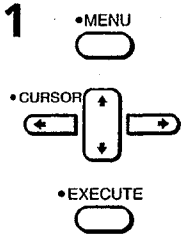
After setting the channels and VIDEO Plus+ guide channels, you can change the programme positions as you like.

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.

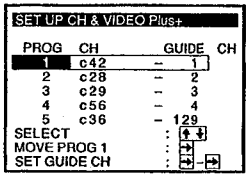
e.g. Moving the programme position from 4 to 1.

1



Press MENU, then press CURSOR ↑/↓ to move the cursor (▮) to SET UP CH & VIDEO Plus+ and press EXECUTE.

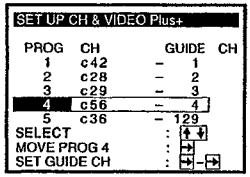
When using the EASY SET UP procedure, skip this step.



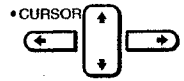
2

Press CURSOR ↑/↓ to move the cursor (▮) to the row on which you want to change the programme position, then press CURSOR →.

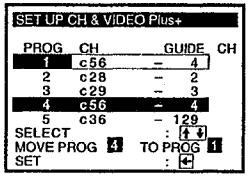
To display other pages for programme positions 6 to 60, press CURSOR ↑/↓ repeatedly.



3



Press CURSOR ↑/↓ until the selected channel and guide channel row moves to the desired programme position.



continued

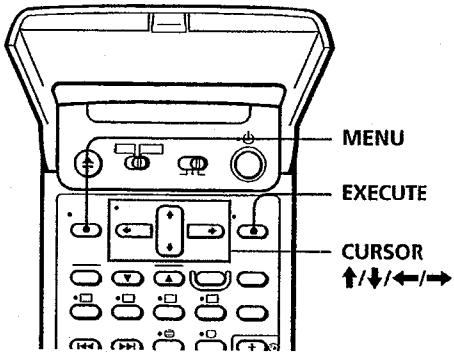
4 Press CURSOR ← to confirm the setting.

The two rows exchange the positions.

5 To change the programme position of another station, repeat steps 2 to 4.

6 •EXECUTE Press EXECUTE.

Manual setup — Setting the clock

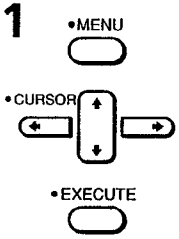


You must set the time and date on the VCR to be able to use the timer recording features properly. You can set the clock manually.

Before you start...

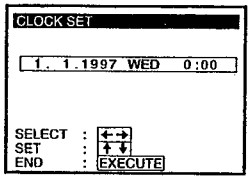
- Turn on the VCR and the TV.
- Set the TV to the video channel.

1

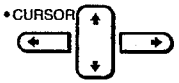


Press MENU, then press CURSOR ↑/↓ to move the cursor (I) to CLOCK SET and press EXECUTE.

When using the EASY SET UP procedure, skip this step.

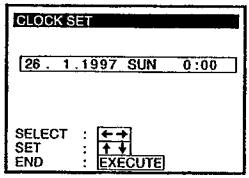


2

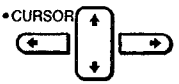


Press CURSOR ↑/↓ to set the day.

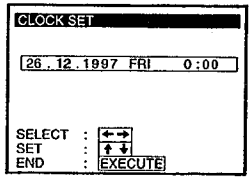
The day of the week is set automatically.



3



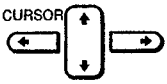
Press CURSOR → to highlight the month and set the month using CURSOR ↑/↓.



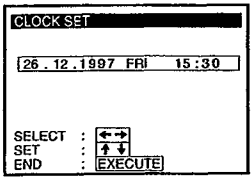
continued

4

•CURSOR



Set the year, hour and minutes in sequence, using CURSOR ➡ to highlight the item to be set, and CURSOR ⬆/⬇ to select the digits.



5 •EXECUTE

Press EXECUTE to start the clock.

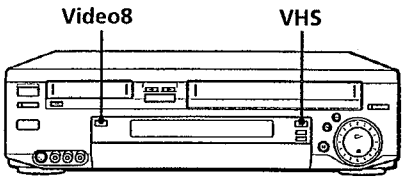
Tips

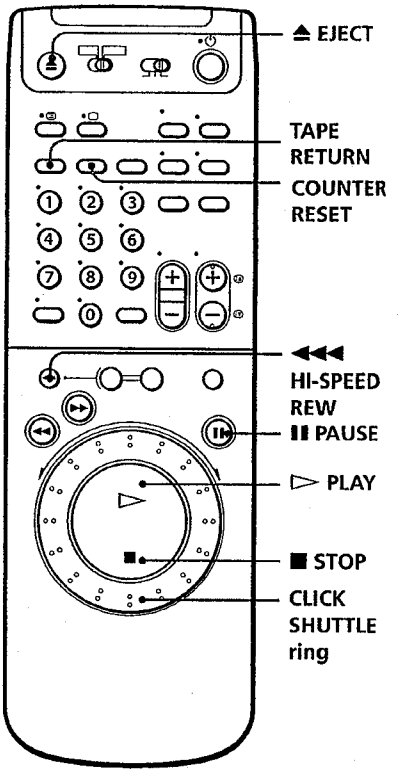
- To change the digits during setting, press CURSOR ⬅ to return to the item to be changed, and select the digits using CURSOR ⬆/⬇.

Note

- The menu disappears automatically if you don't proceed for more than a few minutes.

Playing a tape





1 Turn on your TV and set it to the video channel.

2 Press either Video8 or VHS whichever you want to play back the tape.

3 Insert a tape.

The unit turns on automatically. The tape starts playing automatically if its safety tab has been removed. (VHS deck only)

4

Press ▷ PLAY.

When the tape reaches the end, it will rewind automatically.

continued

Additional tasks

To	Press
Stop play	■ STOP
Pause play	❚❚ PAUSE*
Resume play after pause	❚❚ PAUSE or ▷ PLAY
Search forward	▶▶ FF during playback
Search backward	◀◀ REW during playback
Fast-forward the tape	▶▶ FF during stop
Rewind the tape	◀◀ REW during stop
High-speed rewind (8mm deck only)	◀◀◀ HI-SPEED REW
Eject the tape	⏏ EJECT

When you playback 8mm tape, noise appears during still, slow, and picture search.

* If more than 30 seconds (8mm deck) or 5 minutes (VHS deck) have passed after you pressed ❚❚ PAUSE, the VCR automatically returns to playback mode.

To use the time counter

At the point the tape that you want to find later, press COUNTER RESET. The counter in the display window resets to "0H00M00S." Search for the point afterwards by referring to the counter.

To display the counter on the TV screen, press DISPLAY.

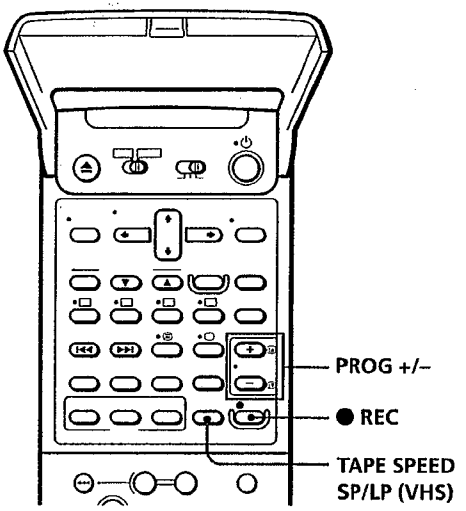
Notes

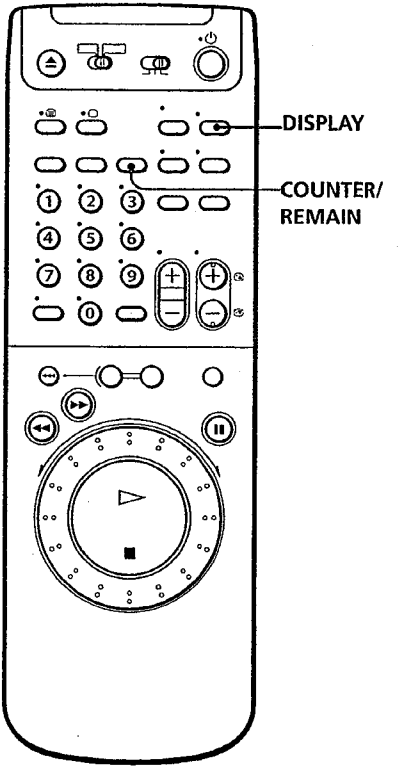
- The counter resets to "0H00M00S" whenever a tape is reinserted.
- The counter stops counting when it comes to a portion with no recording.
- If you have connected your TV to your VCR using the EURO-AV cable, make sure to set the LINE 1 VIDEO OUT option in the SET UP MENU to NORM. However, if your TV has a S input setting, then set the LINE 1 VIDEO OUT option in the SET UP MENU to S.

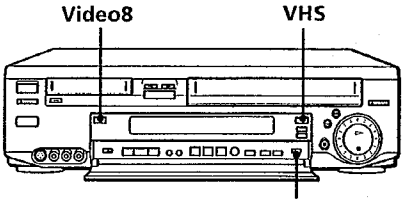
Tip

- To rewind or advance the tape to the point that you have reset the counter to "0H00M00S", press TAPE RETURN.
- You can eject a tape even when the power is off. When you press ⏏ EJECT, the unit turns on automatically. After ejecting a tape, the unit turns off again.

Recording TV programmes







1 Turn on your TV and set it to the video channel.

2 Press either Video8 or VHS for the deck you want to use.

3 Insert a VHS tape with its safety tab in place or an 8 mm tape with the safety switch slid back so that the red portion does not show.

4 +PROG– Press PROG +/– to select the programme position you want to record.

continued

5 TAPE SPEED SP/LP (VHS)

Press TAPE SPEED to select the tape speed, SP or LP. (VHS deck only)

LP provides recording time twice as long as SP; however, SP produces better picture and audio quality.

When recording with 8mm tape, the VCR records in SP mode automatically. You cannot record in LP mode with 8mm tape.

6 ● REC

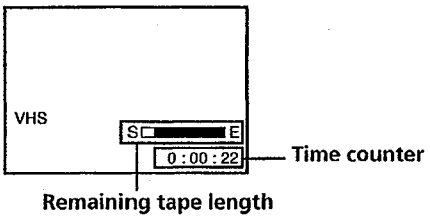
Press ● REC to start recording.

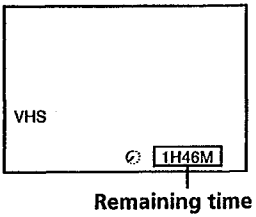
To stop recording

Press ■ STOP.

To check the remaining tape length

Press DISPLAY. The white bar indicates the approximate length of tape remaining. With the display on, press COUNTER/REMAIN to check the remaining time. Each time you press COUNTER/REMAIN, the time counter and the remaining time appear alternately. The remaining time also appears in the display window.





When you use the tape with more than 3-hour recording, set TAPE SELECT according to the tape type. (VHS deck only)

Tape type	Set the switch to
E-300	E300
E-240/E-260	E240
E-195 or less	E195

To watch another TV programme while recording

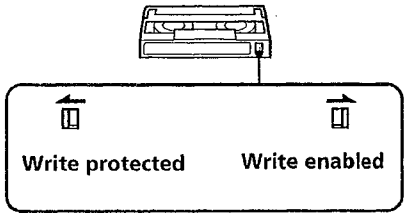
1 Press TV/VIDEO on the remote commander (or TV/VTR on the VCR) to turn off the VTR indicator in the display window.

2 Select another programme position on the TV.

To save a recording

8 mm tapes

Video tapes have a safety switch to protect against accidental recording. To prevent accidental erasure of a recording, slide out the switch on the cassette so that the red portion is visible. A tape with its safety switch in this position ejects if you try to record on it.

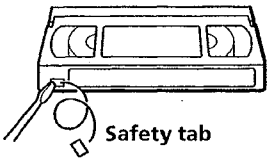


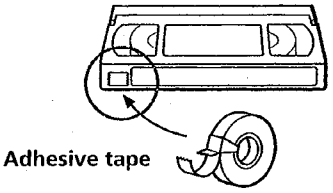
To re-record on a tape, slide the switch so that the red portion is not visible.

VHS tapes

Video tapes have a safety tab to protect against accidental recording. To prevent accidental erasure of a recording, break off the safety tab with a screwdriver or other tool. A tape with its safety tab removed ejects if you try to record on it.

To record on a tape with its safety tab removed, cover the tab hole.





To select tape speeds

When recording, you can select either SP or LP. When playing back, the VCR automatically detects the tape speed. See the table below for the maximum recording/playback time in each speed.

8 mm tape

Tape type	Maximum recording / playback time	
	SP	LP (playback only)
E5-120	2 hrs.	4 hrs.
E5/P5-90	1 hr. 30 min.	3 hrs.
E5/P5-60	1 hr.	2 hrs.
E5/P5-30	30 min.	1 hr.

continued

VHS tape

Tape type	Maximum recording / playback time	
	SP	LP
E-300	5 hrs.	10 hrs.
E-240	4 hrs.	8 hrs.
E-180	3 hrs.	6 hrs.
E-120	2 hrs.	4 hrs.
E-60	1hr.	2hrs.

If you use types other than those listed above, the remaining tape length may not be displayed correctly.

Tips

- You can select a video source from the LINE-1 (TV) or LINE-3 IN connector, or the LINE-2 IN VIDEO/AUDIO L/R jacks using INPUT SELECT.
- The display appears on the TV screen indicating information about the tape, but the information won't be recorded on the tape.
- To select programme positions, you can also use the programme number buttons on the remote commander. For two-digit numbers, press the -/-- (ten's digit) button followed by the number buttons.
- If you don't want to watch TV while recording, you can turn off the TV. When using a decoder, make sure to leave it on.

Notes

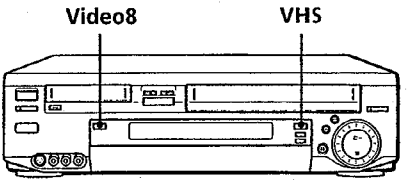
- If you have connected your TV to your VCR using the EURO-AV cable, make sure to set the LINE 1 VIDEO OUT option in the SET UP MENU to NORM.
  However, if your TV has a S input setting, then set the LINE 1 VIDEO OUT option in the SET UP MENU to S.
- You cannot record TV programmes using both the 8 mm deck and the VHS deck at the same time.
- You cannot record a video source from the one input connector using both the 8 mm deck and the VHS deck at the same time.
- If you insert a VHS tape with its safety tab removed or an 8mm tape with the safety switch slid to show the red portion, and press ● REC, the VCR automatically ejects the tape. To record, cover the tab hole of the VHS tape or slide the switch of the 8 mm tape so that the red portion is not visible.
- When the tape comes to an end, the VCR automatically rewinds the tape to the beginning.

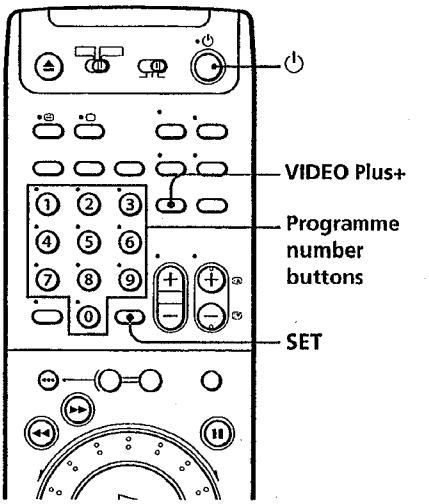
Recording TV programmes using VIDEO Plus+

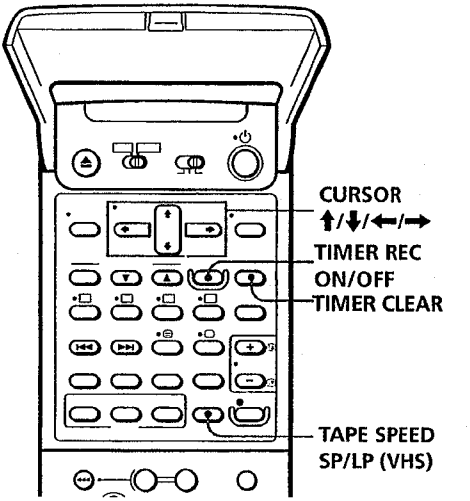
Just enter the programme's "PlusCode" listed in the TV programme guide. The date, times and programme position of that programme are set automatically. You can preset up to eight programmes at a time.

Before you start...

- Check that the VCR clock is set to the correct time.
- Insert a VHS tape with its safety tab in place or an 8mm tape with the safety switch slid so that the red portion does not show. Make sure the tape is longer than the total recording time.
- Turn on your TV and set it to the video channel.
- Set the guide channels (page 21).
- When using a satellite tuner, turn it on.

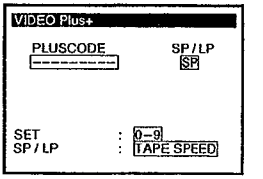






1 Press either Video8 or VHS which is set in the SET UP MENU.

2 VIDEO Plus+ Press VIDEO Plus+.

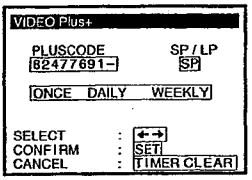


continued

3 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Press the programme number buttons to enter the programme's PlusCode.

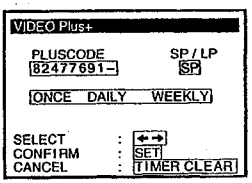
If you make a mistake, press TIMER CLEAR and re-enter the correct number.



4 TAPE SPEED SP/LP (VHS)

Press TAPE SPEED to select SP or LP. (VHS tape)

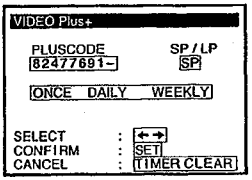
When you record with an 8 mm tape, skip this step.



5 •CURSOR

Press CURSOR ←/→ to select ONCE, DAILY or WEEKLY:

To record	Display
Only once	ONCE
Every day Monday to Friday	DAILY
Once a week	WEEKLY

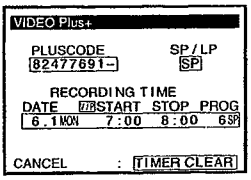


6 SET

Press SET.

The date, start and stop times, programme position, and tape speed appear on the TV screen.

If you want to turn on the PDC function, see "Timer recording with PDC signals" on page 40.



If the information is not correct, press TIMER CLEAR to cancel the setting.

7 To enter another setting, repeat steps 2 to 6.

8 TIMER REC ON/OFF

Press TIMER REC ON/OFF to turn off the VCR.

The TIMER REC indicator appears in the display window and the VCR stands by for recording.

To stop recording

To stop the VCR while recording, press TIMER REC ON/OFF.

To record satellite broadcasts

If you connect a satellite tuner and the VCR, you can record satellite programmes.

1. Turn on the satellite tuner.
2. On the satellite tuner, select the satellite programme for which you wish to make a timer setting.
3. Repeat the steps described above.
4. Keep the satellite tuner turned on until the VCR finishes recording the satellite programme for which you have made a timer setting.

To use the VCR after setting the timer

To use the VCR before a timer recording begins, just press TIMER REC ON/OFF. The TIMER REC indicator turns off and press ⏻ to turn on the VCR. Remember to press TIMER REC ON/OFF to reset the VCR after using the VCR.

You can also do the following tasks while the VCR is recording:

- Reset the counter.
- Display tape information on the TV screen.
- Check the timer settings.
- Watch another TV programme.

Tip

- To cancel the procedure, press VIDEO Plus+ before pressing SET.

Note

- If the VCR beeps repeatedly, this means that:
  - The PlusCode is incorrect.
  - ONCE, DAILY, or WEEKLY was selected incorrectly. You cannot select DAILY or WEEKLY for a programme that airs more than seven days ahead.
- You cannot set the timer recording on both the 8 mm deck and VHS deck, since you have to select the deck before you make the setting. If one deck has been already standing by for timer recording, select that deck for timer recording.
- While one deck is standing by for timer recording or proceeding timer recording, another deck can only play back a recorded tape and record the line input source.

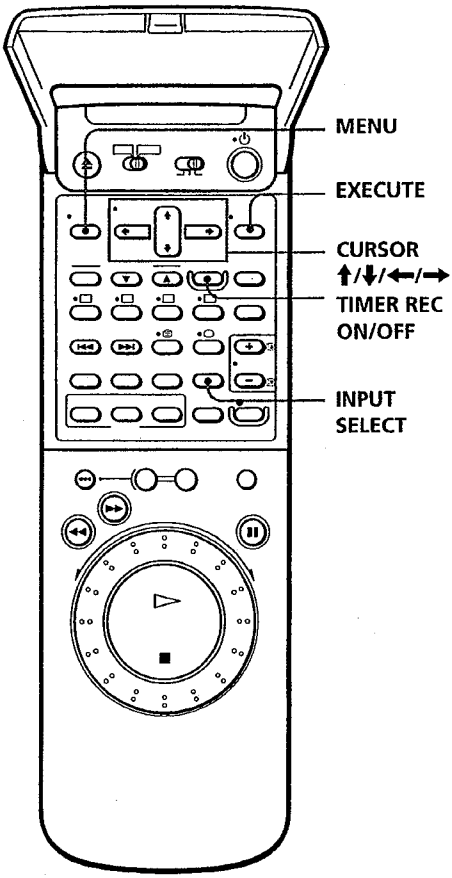
Setting the timer manually

If VIDEO Plus+ is not available in your area, follow the instructions below to set the timer to record programmes.

You can preset up to eight programmes at a time.

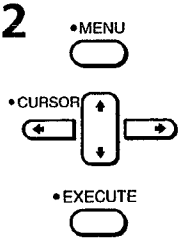
Before you start...

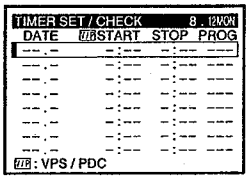
- Check that the VCR clock is set to the correct time.
- Insert a VHS tape with its safety tab in place or an 8 mm tape with the safety switch slid so that the red portion does not show. Make sure the tape is longer than the total recording time.
- Turn on your TV and set it to the video channel.
- When using a satellite tuner, turn it on.



1 Press either Video8 or VHS which is set in the SET UP MENU.

2 Press MENU and select TIMER SET/CHECK, then press EXECUTE.





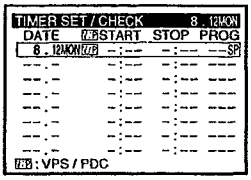
3 •CURSOR

Set the date, PDC function, start and stop times, programme position, and tape speed (VHS deck only) :

1 Press CURSOR ➡ to highlight each item in turn.

2 Press CURSOR ↑/↓ to set each item.

To correct a setting, press CURSOR ⬅ to return to that setting and reset.



To record the same programme every day or the same day every week, press CURSOR ↓ while the date is highlighted. For details, see "Daily/weekly recording" on the next page.

If you don't want to use the PDC function, press CURSOR ↑/↓ to turn off V/P in the "V/P" position. For details, see "Timer recording with PDC signals" on the next page.

To record from other sources connected to the LINE-1(TV) or LINE-3 IN connector, or the LINE-2 IN jacks, press INPUT SELECT to display "L1," "L3," or "L2" in the "PROG" position.

4 •CURSOR

Press CURSOR ➡ to confirm the setting.

The cursor (I) appears at the top of the line. To enter another setting, move the cursor to the next line and repeat step 3.

5 •EXECUTE

Press EXECUTE.

6 TIMER REC ON/OFF

Press TIMER REC ON/OFF to turn off the VCR.

The TIMER REC indicator appears in the display window and the VCR stands by for recording.

To record from a decoder or other source, leave the connected equipment switched on.

To stop recording

To stop the VCR while recording, press TIMER REC ON/OFF.

continued

Daily/weekly recording

In step 3 on the previous page, press CURSOR ↓ to select the recording pattern. Each time you press CURSOR ↓, the indication changes as shown below.

the current date → SUN-SAT → MON-SAT → MON-FRI → EVERY SAT .....
→ EVERY MON → EVERY SUN → 1 month later →(cycles backward)
→ the current date

Timer recording with PDC signals

The broadcast systems transmit PDC (Programme Delivery Control) signals with its TV programmes. These signals ensure that your timer recordings are made regardless of broadcast delay, early starts or broadcast interruptions.

In step 3 on the previous page, press CURSOR ↑/↓ to turn on/off the V/P indicator after you set the recording date. If you do not want to set the PDC function, turn off the V/P indicator.

You can also use the PDC function for a source connected to the LINE-1 (TV) and LINE-3 IN connectors, and the LINE-2 IN jacks.

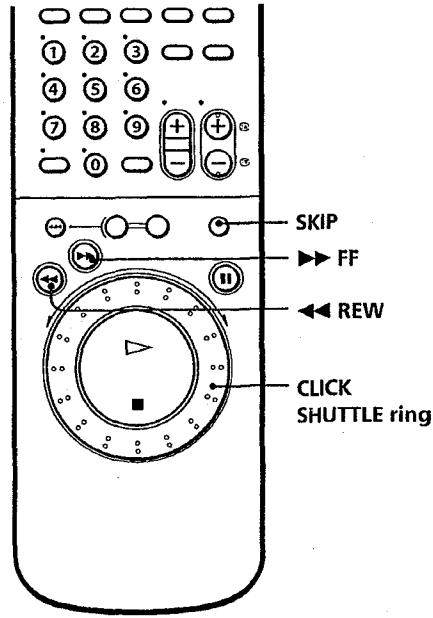
Tips

- To set the programme position, you can also use the PROG +/– or programme number buttons.
- To set the tape speed, you can also use TAPE SPEED. (VHS deck only)

Notes

- When setting the timer with PDC signals, enter the start and stop times exactly as indicated in the TV programme guide, otherwise the PDC function won't work.
- If the PDC signal is too weak or the broadcasting station failed to transmit PDC signals, the VCR will start recording at the set time without using the PDC function.
- You cannot make setting for timer recording on both 8 mm deck and VHS deck, since you have to select the deck before you make setting. If one deck has been already standing by for timer recording, select that deck for timer recording.
- While one deck is standing by for timer recording or proceeding timer recording, another deck can only play back a recorded tape and record the line input source.

Playing/searching at various speeds



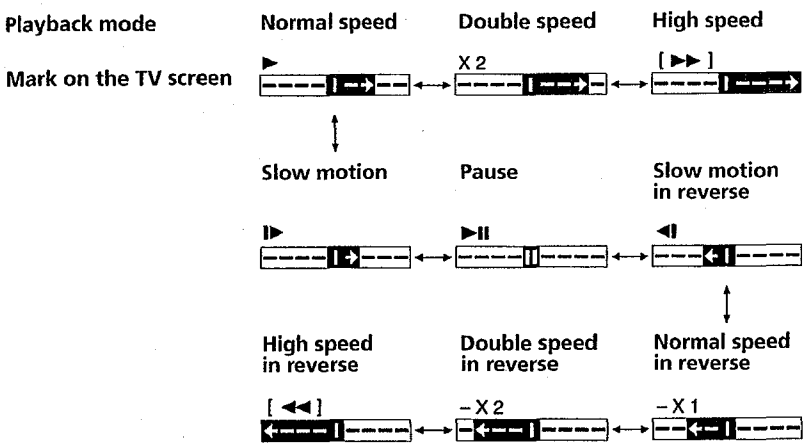
Playback options	Operation
Fast-forward/rewind	During stop, press ▶▶ FF or ◀◀ REW.
View the picture during fast-forward or rewind	During fast-forward, hold ▶▶ FF down. During rewind, hold ◀◀ REW down.
Skip a scene	During playback, press SKIP. Pressing once skips about 30 seconds.
Rewind and start play	During stop, hold ◀◀ REW on the VCR, and press ▷ PLAY on the VCR.

continued

Using the CLICK SHUTTLE ring

With the CLICK SHUTTLE ring, you can operate a variety of playback options.

During playback or pause, turn the CLICK SHUTTLE ring clockwise or counterclockwise. Each change in the CLICK SHUTTLE ring position changes the playback mode, and the corresponding mark appears on the TV screen for a few seconds in the following way if the on-screen display function is on:



To resume normal playback

Press ▷ PLAY.

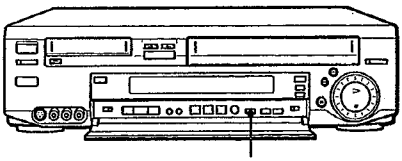
Tip

- Adjust the picture using ▼/▲ TRACKING if (VHS deck only) :
  - Streaks appear while playing in slow motion.
  - Bands appear at the top or bottom while pausing.
  - The picture shakes while pausing.

Notes

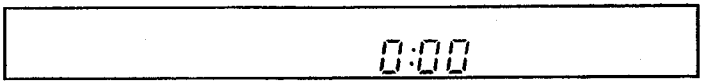
- The playback sound is muted during these operations.
- In the LP mode, noise may appear or there may be no colour.
- The colour of the picture may not be reproduced normally while playing back a tape at various speeds or pausing.
- Tapes recorded in the LP mode on other VCRs can be played back on this VCR but the picture quality cannot be guaranteed.
- If the playback mode mark doesn't appear on the TV screen, press DISPLAY.

Recording TV programmes using the quick timer



After starting recording in the normal way, you can have the VCR stop recording automatically after a specified duration.

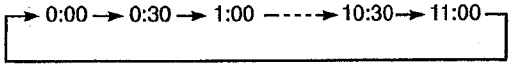
1 While recording, press QUICK TIMER once.



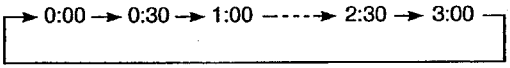
2 Press QUICK TIMER repeatedly to set the duration.

Each press advances the time in increments of 30 minutes.

VHS deck



8 mm deck



The duration decreases minute by minute to 0:00, then the VCR stops recording and turns off automatically.

To extend the duration

Press QUICK TIMER repeatedly to set to the new duration.

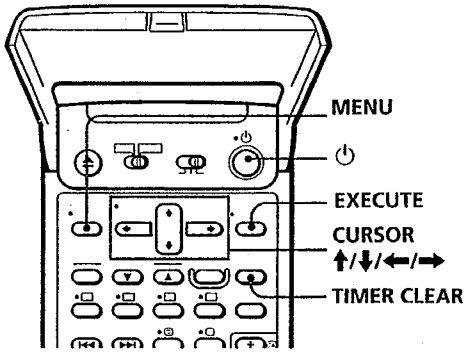
To stop recording

To stop the VCR while recording, press TIMER REC ON/OFF.

Tip

- You can also set the quick timer and start recording during the stop mode.

Checking/ changing/ cancelling timer settings



Before you start...

- Turn on your TV and set it to the video channel.

1 Press either VHS or Video8 whichever you set the timer for.

2 Press TIMER REC ON/OFF to turn off the TIMER REC indicator.

3 Press ⏻ to turn on the VCR.

4 Press MENU, then select TIMER SET/CHECK.

- If you want to change a setting, go on to the next step.
- If you do not need to change the settings, press EXECUTE and TIMER REC ON/OFF, then turn off the VCR to return to recording standby.

TIMER SET/CHECK				8 12MON
DATE	V/P	START	STOP	PROG
16.12TUE	V/P	20:00	22:00	5 8LP
5.1MON	V/P	7:00	8:00	6SP
27.12SAT		8:30	10:15	L1P
16.12TUE	V/P	9:58	12:00	L2SP
MON—SAT		0:12	13:00	27P
EVERY SUN		23:00	0:00	L1SP
--.--		--:--	--:--	---
--.--		--:--	--:--	---

V/P: VPS/PDC

5 Press CURSOR ↑/↓ to select the setting you want to change or cancel:

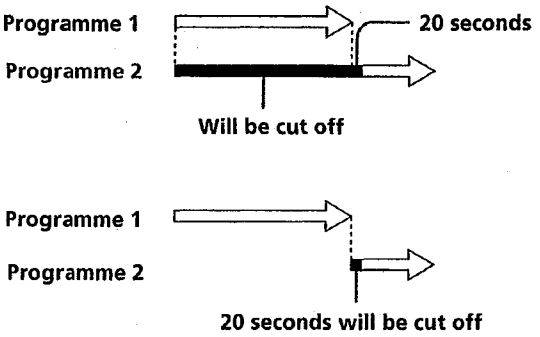
- To change the setting, press CURSOR ←/→ to highlight the item you want to change, and press CURSOR ↑/↓ to reset it.
  To cancel the PDC function, turn off the V/P indicator.
  Then, press CURSOR → repeatedly until the cursor (▮) appears at the top of the line.
- To cancel the setting, press TIMER CLEAR.

6 Press EXECUTE.

If any settings remain, press TIMER REC ON/OFF. The VCR turns off and returns to recording standby.

When the timer settings overlap

The programme that starts first has priority and the second programme starts recording only after the first programme has finished. If the programmes start at the same time, the programme listed first in the menu has priority.



Recording stereo and bilingual programmes

In NICAM system

This VCR receives and records stereo and bilingual programmes based on the NICAM system (the NICAM indicator appears). When a stereo or bilingual programme is received, the STEREO or MAIN/L indicator appears in the display window.

To record a NICAM programme, NICAM in the SET UP MENU should be set to ON (initial setting). To check the menu setting, see page 50.

To select the sound while recording

Press AUDIO MONITOR to select the sound you want.

Stereo programme

To listen to	On-screen display	Display window
Stereo	STEREO	STEREO
Standard sound*	No indicator	No indicator

* Usually the mixed sound of left and right channels (monaural) (VHS deck only)

Bilingual programme

To listen to	On-screen display	Display window
Main	MAIN	MAIN/L
Sub	SUB	SUB/R
Main and sub	MAIN/SUB	MAIN/L, SUB/R
Standard sound*	No indicator	No indicator

* Usually the main sound (monaural) (VHS deck only)

Selecting the sound during playback

Press AUDIO MONITOR to select the sound you want.

Stereo programme

To listen to	On-screen display	Display window
Stereo	STEREO	STEREO
Left channel	LCH	MAIN/L
Right channel	RCH	SUB/R
Standard sound*	No indicator	No indicator

* Usually the main sound (monaural) (VHS deck only)

Bilingual programmes
8 mm tape

To listen to	On-screen display	Display window
Main	MAIN	MAIN/L
Sub	SUB	SUB/R
Main and sub	MAIN/SUB	MAIN/L, SUB/R

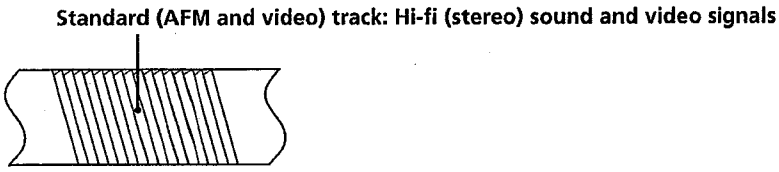
VHS tape

To listen to	On-screen display	Display window
Main	LCH	MAIN/L
Sub	RCH	SUB/R
Main and sub	STEREO	MAIN/L, SUB/R
Standard sound	No indication	No indication

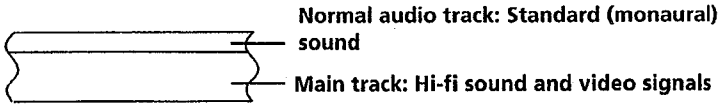
How sound is recorded on a video tape

This VCR records sound onto two different tracks. High-fidelity sound (usually stereo) is recorded onto the main track (VHS tape) or the standard (AFM) track (8 mm tape) along with the picture. Monaural sound is recorded onto the normal audio track along the edge of the tape (VHS tape).

8 mm tape



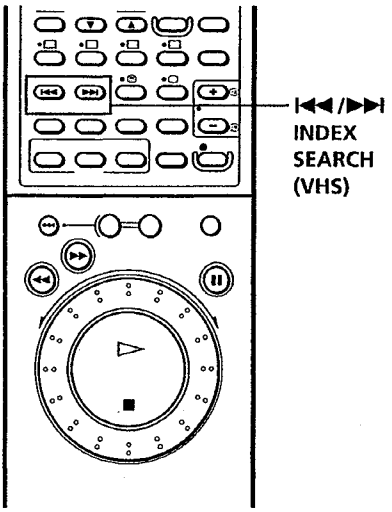
VHS tape



Notes

- To listen to playback sounds in stereo, you must use the LINE-1(TV) or LINE OUT connections.
- When you play a tape recorded in monaural, the sound is heard in monaural regardless of the AUDIO MONITOR setting.
- If the AUDIO MONITOR button does not function, check that VHS AUDIO MIX in the SET UP MENU is set to OFF.

Searching using the index function (VHS deck only)

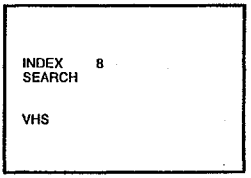


The VCR marks the tape with an index signal at the point where each recording begins. Use these signals as references to find a specific recording. The VCR can search up to 99 index signals ahead of or behind the current position.

1 Insert an indexed tape into the VCR.

2 Press I◀◀ /▶▶I INDEX SEARCH repeatedly to specify how many index signals ahead or behind you want to search:

- To search ahead, press ▶▶I INDEX SEARCH.
- To search backwards, press I◀◀ INDEX SEARCH.



The VCR starts searching and the index number on the TV screen counts down to zero. Playback starts automatically from that point.

To stop searching

Press ■ STOP.

Note

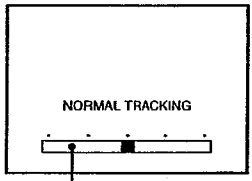
- No index signal will be added when recording starts from recording pause. However, an index signal will be marked if you change the channel during recording pause.

Adjusting the picture (VHS deck only)

Adjusting the tracking

Although the VCR automatically adjusts the tracking when playing a tape (the AUTO TRACKING indicator flashes in the display window, then lights steadily), distortion may occur if the tape was recorded in poor condition. If so, manually adjust the tracking.

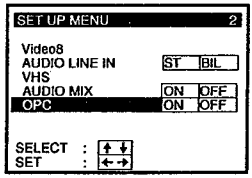
Press ▼/▲ TRACKING to display the tracking meter. The distortion should disappear as you press one of the two buttons. If you cannot get a clear picture with manual adjustment, press TRACKING AUTO/MANU (VHS) to return to automatic adjustment.



Tracking meter

About Optimum Picture Control (OPC)

Optimum Picture Control (OPC) automatically improves recording and playback quality by adjusting the VCR to the condition of the video heads and tape. To maintain better picture quality, we recommend that you set VHS OPC to ON in the SET UP MENU (with the OPC indicator in the display window lit).



OPC playback

The OPC function automatically works on all types of tapes, including rental tapes and tapes that were not recorded with OPC.

OPC recording

Whenever you insert a tape and first start recording, the VCR adjusts to the tape using the OPC function (the OPC indicator flashes rapidly). This adjustment is retained until the tape is ejected.

To deactivate the OPC

Press MENU and select SET UP MENU, then set VHS OPC to OFF. The OPC indicator in the display window goes off.

Note

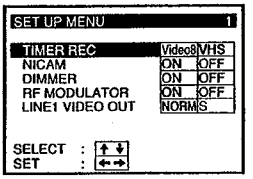
- There is a delay of a few seconds before the VCR actually starts recording while the VCR analyses the tape. To avoid the delay, first set the VCR to recording pause (the OPC indicator flashes slowly) and press ● REC to have the VCR analyse the tape (the OPC indicator flashes rapidly). After the OPC indicator stops flashing, press ❚❚ PAUSE to start recording immediately. If you want to start recording quickly without using the OPC function, first set the VCR to recording pause (the OPC indicator flashes slowly) and press ❚❚ PAUSE to start recording.

Changing menu options

1 Press MENU, then select SET UP MENU.

2 Press CURSOR ↑/↓ to select the option to change, then press CURSOR ←/→ to change the setting.

3 Press EXECUTE to return to the original screen.

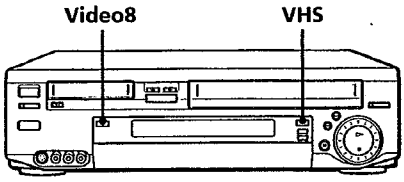


Menu choices

Initial settings are indicated in bold print.

Menu option	Set this option to
TIMER REC	Video8 to select the 8 mm deck for timer recording. **VHS** to select the VHS deck for timer recording.
NICAM	**ON** to listen to and record stereo/bilingual programmes that are broadcast on the NICAM system and recorded. OFF when you do not wish to use the NICAM system and when recording an 8 mm standard sound. For details, see page 46.
DIMMER	ON to dim the VCR display. **OFF** to brighten it.
RF MODULATOR	**ON** if you have connected the VCR to your TV using only the aerial cable. OFF if you have connected the VCR to your TV using the EURO-AV, S or AV cable.
LINE 1 VIDEO OUT	**NORM** when using a EURO-AV cable. S when using a EURO-AV cable connected to a TV with an S connection.
Video8 AUDIO LINE IN	**ST** to listen to and record stereo sound using and the LINE IN jacks when selected the 8 mm deck. BIL to listen to and record bilingual programmes using the LINE IN jack when selected the 8 mm deck.
VHS AUDIO MIX	ON to listen to the hi-fi and normal audio tracks at the same time when selected the VHS deck. The AUDIO MONITOR button becomes inoperable. **OFF** to select the sound using the AUDIO MONITOR button when selected the VHS deck.
VHS OPC	**ON** to activate the OPC (Optimum Picture Control) when selected the VHS deck. OFF to deactivate it. For details, see page 49.

Using the 8 mm deck and VHS deck at the same time



Using one deck while the other is playing back a tape

1 Press Video8 or VHS to select the deck that is not in use.

2 Use the selected deck.

Using one deck while the other is recording

1 Press Video8 or VHS to select the deck that is not in the recording mode.

2 Use the selected deck.

Using one deck while the other is standing by for timer recording or proceeding timer recording

1 Press Video8 or VHS to select the deck that is not in use.

2 Use the selected deck.

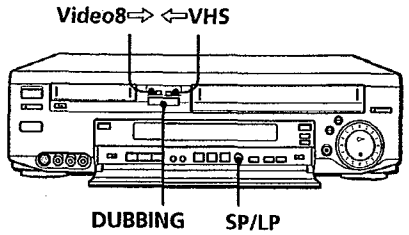
While one deck is standing by for timer recording or proceeding timer recording, the other deck can only play back a recorded tape and record the line input source.

Note

You cannot record two TV programmes at the same time, or use both decks at the same time to record one line input source.

One button dubbing

One button dubbing is a way of editing the entire tape contents to another tape automatically from one deck to the other.



Before you start editing

- Turn on your TV and set it to the video channel.

1 Insert a source tape into one deck and a tape for recording into the other deck.

2 Press Video8 ⇨ or ⇦ VHS to select the editing direction.

"Video8 ⇨ " means that the recording is made from the 8 mm tape to the VHS tape.

"⇦ VHS" means that the recording is made from the VHS to the 8 mm tape.

3 Press SP/LP button to select TAPE SPEED of the VHS tape when you record from the 8mm tape to the VHS tape.

When you record from the VHS tape to the 8 mm tape, skip this step.

4 Press DUBBING.

The VCR rewinds both tapes to the beginning, and starts dubbing automatically. When either tape reaches the end, the VCR rewinds both tapes to the beginning, and ejects them. And then, the power turns off automatically.

To stop editing

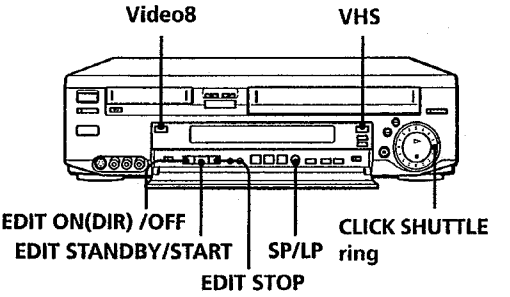
Press the ■ STOP button.

Notes

- When editing from VHS tape to 8 mm tape, note the following:
  - If editing is proceeding with a VHS tape that you have recorded, the tape may be automatically ejected. In this case, check the safety tab. If the tab is removed, cover the tab hole with adhesive tape and after recording, remove the tape to protect the recording. Make sure of the direction for recording so that you won't accidentally erase an important recording.
  - If the safety switch on the 8 mm tape to be used as an original tape is slid out so that the red portion is visible, the tape is automatically ejected. In this case, slide the switch back in place so that the red portion is not visible. Make sure of the direction for recording.
- Noise may appear at the beginning part of the edited tape.
- If the playback deck play blank for 5 minutes, both decks automatically stop, rewind tapes to the beginning, and eject them. And then, the power turns off automatically.

Cut editing

You can edit VCR recording from one deck to the other with cutting your unwanted event.



Before you start editing

- Turn on your TV and set it to the video channel.

1 Insert a source tape into one deck and a tape for recording into the other deck.

Locate the recording start point by rewinding or fast-forwarding.

2 Press Video8 or VHS to select the recording deck.

When you select VHS, press SP/LP button to select TAPE SPEED of the VHS tape.

3 Press EDIT ON (DIR)/OFF to select the editing direction.

Each pressing of the button changes as follows:

Video8 ⇨ VHS → Video8 ⇦ VHS → no indication

"Video8 ⇨ VHS" means that the recording is made from the 8 mm tape to the VHS tape.

"Video8 ⇦ VHS" means that the recording is made from the VHS to the 8 mm tape.

4 Press EDIT STANDBY/START.

The playback deck enters the playback pause mode and the recording deck enters the recording pause mode. The indicator above the button flashes.

5 Press EDIT STANDBY/START again.

Both decks release the pause and starts editing. The indicator above the button lights.

6 Press EDIT STANDBY/START at the beginning of the unwanted event.

Both decks enter the pause mode. The indicator above the button flashes.

continued

7 Select the playback deck and turn the CLICK SHUTTLE ring on the VCR until the unwanted event starts.

8 Press EDIT STANDBY/START again when a desired event appears on the screen.

Editing starts. The indicator above the button lights.

9 Repeat steps 6 to 8 to cut other unwanted events.

Select the playback deck and turn the CLICK SHUTTLE ring on the VCR until the unwanted event starts.

10 When editing is finished, press EDIT STOP.

11 Press EDIT ON(DIR)/OFF so that the Video8 ⇨ VHS or Video8 ⇦ VHS indicator goes off.

To stop the VCR while editing

Press EDIT STOP.

Notes

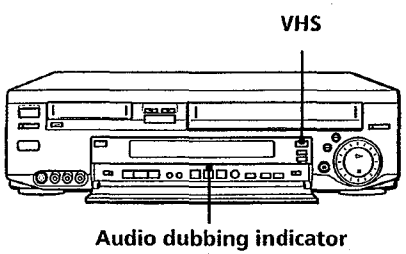
- When editing from VHS tape to 8 mm tape, note the following:
  - If editing is proceeding with a VHS tape that you have recorded, the tape may be automatically ejected. In this case, check the safety tab. If the tab is removed, cover the tab hole with adhesive tape and after recording, remove the tape to protect the recording. Make sure of the direction for recording so that you won't accidentally erase an important recording.
  - If the safety switch on the 8 mm tape to be used as an original tape is slid out so that the red portion is visible, the tape is automatically ejected. In this case, slide the switch back in place so that the red portion is not visible. Make sure of the direction for recording.
- Noise may appear at the beginning part of the edited tape.
- When you press ❚❚ PAUSE or EDIT STANDBY/START while editing from the 8mm tape to the VHS tape, the picture may turn obscure.

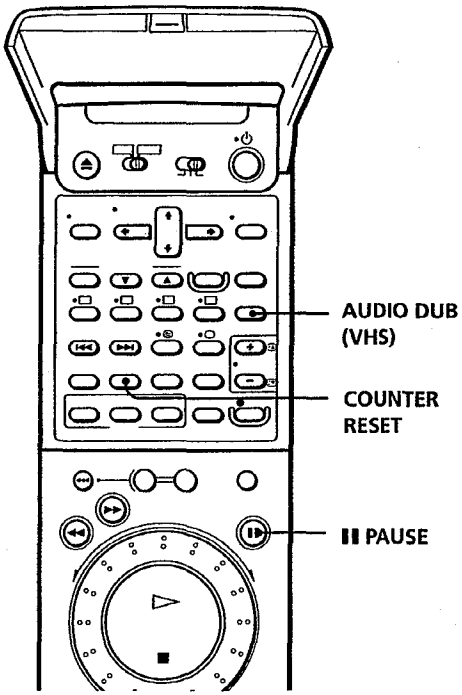
Audio dubbing (VHS deck only)

This feature lets you record over the normal audio track. The monaural sound previously recorded is replaced while the original hi-fi sound remains unchanged. Use this feature to add commentary to a tape that you have recorded with a camcorder.

Before you start editing...

- Turn on your TV and set it to the video channel.
- Press INPUT SELECT to display "L2" or "L3" in the display window.





1 Insert the source tape into the stereo system (or the playback VCR). Search for the point to start playback and set it to playback pause.

2 Press VHS to select the VHS deck.

3 Insert a prerecorded tape with its safety tab in place into this (recording) VCR. Search for the end of the section to be replaced and press II PAUSE.

4 Press COUNTER RESET on this VCR to reset the counter to "0H00M00S."

5 Rewind the prerecorded tape to the beginning of the section to be replaced.

The VCR pauses.

6 Press AUDIO DUB (VHS).

The audio dubbing indicator lights up.

continued

7 To start editing, press the ❚❚ PAUSE buttons on this VCR and the stereo system (or other VCR) at the same time.

When the counter reaches "0H00M00S," audio dubbing stops automatically.

To stop while editing

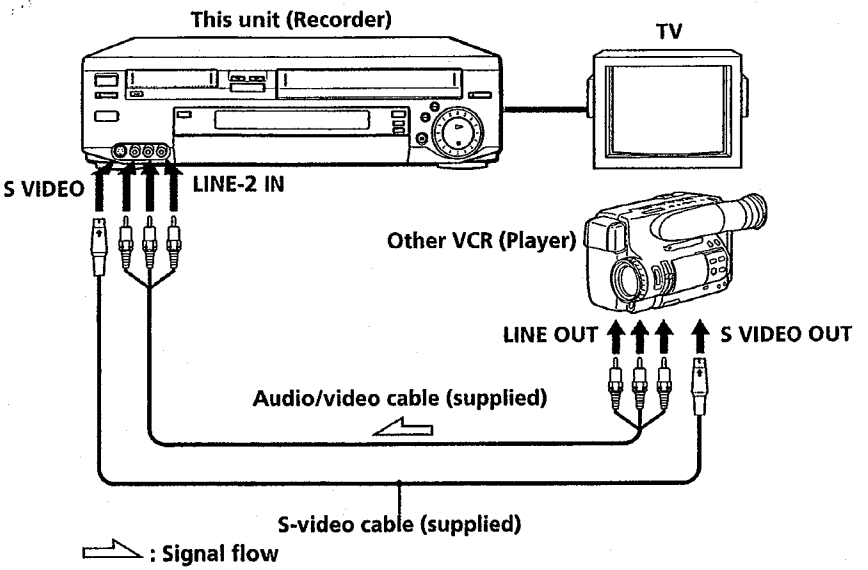
Press the ■ STOP buttons on this VCR and the stereo system (or other VCR).

To listen to both the hi-fi and normal audio

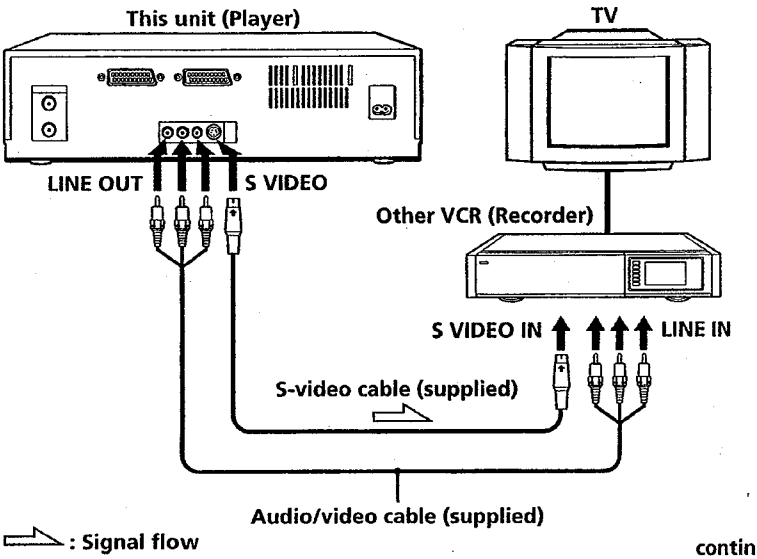
Set VHS AUDIO MIX to ON in the SET UP MENU (page 50). Use this feature to listen to dubbed audio over the original hi-fi audio. When VHS AUDIO MIX is set to ON, the AUDIO MONITOR button does not function. Remember to reset VHS AUDIO MIX to OFF after playing the tape.

Editing with another VCR

How to hook up to record on this unit



How to hook up to record on another VCR



continued

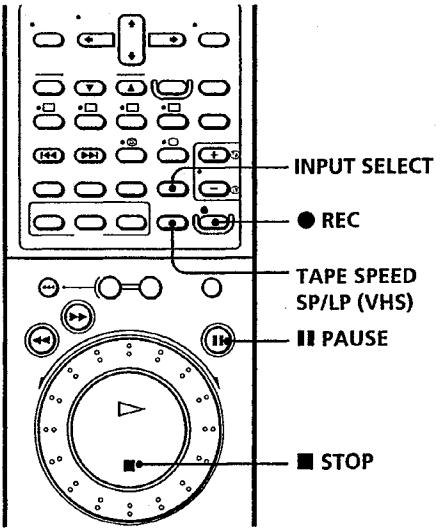
Tips

- When you use LINE-2 IN jack on the front, remove LINE IN jack cover.
- Make sure you connect the plugs to jacks of the same colour.
- When connection is made using the EURO-AV connector, if the other VCR doesn't have a EURO-AV (Scart) connector, use the VMC-2106 EURO-AV connecting cable.

Operation (when recording on this VCR)

Before you start editing

- Press INPUT SELECT to display "L2" in the display window.
- Press TAPE SPEED to select the recording tape speed (SP/LP) (VHS deck only).
- If the other (playback) VCR has an EDIT function, set it to ON.



1 Insert the source tape into the other (playback) VCR. Search for the point to start playback and set it to playback pause.

2 Insert a tape for recording into this (recording) VCR. Search for the point to start recording and press II PAUSE.

The VCR enters playback pause mode.

3 Press ● REC on this VCR to set it to recording pause.

4 To start editing, press the II PAUSE buttons on both VCRs to release the VCRs from pause.

For best results, press the pause on the playback VCR just before pressing II PAUSE button on this VCR.

To stop editing

Press the ■ STOP buttons on both VCRs.

Tips

- To make your editing more precise, release the VCRs from pause by pressing ❚❚ PAUSE buttons on the VCRs, not on the remote comander.
- To cut out unwanted events while editing, press ❚❚ PAUSE on this VCR when an unwanted event begins. When it ends, press ❚❚ PAUSE again to resume recording.

Troubleshooting

If you have any questions or problems not covered below, please consult your nearest Sony service facility.

	Symptom	Remedy
Power	The ON/STANDBY switch does not function.	• Connect the mains lead securely.
	The power is turned on but the VCR does not operate.	• Moisture condensation has occurred. Turn the power off, unplug the mains lead and leave the VCR to dry for over one hour.
Clock	The clock has stopped and "-:--" lights in the display window.	• The clock stops if the VCR is disconnected from the mains for more than one hour. Reset the clock (and timer).
Playback	The playback picture does not appear on the TV screen.	• Make sure the TV is set to the video channel. If you are using a monitor, set it to video input. • If the VCR is connected to the TV only with the aerial cable, make sure that the RF MODULATOR option in the SET UP MENU is set to ON.
	The picture is not clear.	• Adjust the tracking with the ▼/▲ TRACKING buttons. (VHS deck only) • The video heads are dirty (see below). Clean the video heads using the Sony video head cleaning cassette. If this cleaning cassette is not available in your area, have the heads cleaned at your nearest Sony service facility (a standard service charge will be required). Do not use a commercially available wet-type cleaning cassette, as it may damage the video heads. • The video heads may have to be replaced. Consult your local Sony service facility for more information.
	The picture rolls vertically during picture search.	• Adjust the vertical hold control on the TV or monitor.

Symptoms caused by contaminated video heads

• Normal picture • Rough picture • Unclear picture • No picture (or black & white screen appears)

initial ——————→ terminal

	Symptom	Remedy
Playback	The picture has no sound.	• The tape is defective. Use a new tape.
	The sound is unstable or has an echo.	• When you play a tape with the same sound recorded on both the hi-fi and normal sound tracks, make sure the VHS AUDIO MIX option in the SET UP MENU is set to OFF.
Recording	No TV programme appears on the TV screen.	• Make sure the TV is set to the video channel. If you are using a monitor, set it to video input. • If the VCR is connected to the TV using only the aerial cable, make sure that the RF MODULATOR option in the SET UP MENU is set to ON.
	TV reception is poor.	• Adjust the TV aerial. • If the VCR is connected to the TV using only the aerial cable, set the RF MODULATOR option in the SET UP MENU is set to ON.
	The tape starts playing as soon as it is inserted.	• The safety tab of the VHS tape has been removed. To record on this tape, cover the tab hole.
	The tape is ejected when you press ● REC.	• Check that the safety tab of the VHS has not been removed, or that the safety switch of the 8 mm tape has not been slid to show the red portion.
	Nothing happens when you press ● REC.	• Make sure the tape is not at its end. • Select the correct source with the INPUT SELECT button. Select a programme position when recording TV programmes; select "L1," "L2," or "L3" when recording from other equipment.
Timer recording	The timer does not operate.	• Check that the clock is set. • Make sure a tape has been inserted. • Check that the safety tab of the VHS has not been removed, or that the safety switch of the 8 mm tape has not been slid to show the red portion. • Make sure the tape is not at its end. • Make sure a programme has been set for timer recording. • Make sure your timer settings have not already passed the current time. • Check that the decoder is turned on. • Check that the satellite tuner is turned on. • The clock stops if the VCR is disconnected from the mains for more than one hour. Reset the clock and timer.
	Timer recording cannot be made by one deck.	• Make sure to use the deck which you have selected TIMER REC option in the SET UP MENU.

continued

	Symptom	Remedy
Others	A tape cannot be inserted.	• Check that a tape isn't already in the tape compartment.
	The remote commander does not function.	• Make sure you are pointing the remote commander at the remote sensor on the VCR. • Replace all the batteries in the remote commander with new ones if they are weak. • Set COMMAND MODE selectors on both the VCR and the remote commander to the same positions. • Make sure the TV/VIDEO remote control switch is set correctly.
	The tracking indicator does not appear on the screen.	• The recording condition of the tape is very poor and tracking cannot be adjusted.
	You cannot control other TVs.	• Set your TV's code number. The code number resets to 01 when you replace the batteries of the remote commander.
	The VCR needs to be cleaned.	• Clean the cabinet, panel and controls with a dry, soft cloth, or a soft cloth slightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine.

Hi8 (high eight) video system

Both Hi8 and standard 8 cassette tapes can be used with this VCR. Refer to the charts below for the compatibility between the Hi8 video system and the standard 8 system.

When playing a tape/recording on a tape

This VCR automatically detects the type of tape, either Hi8 or standard 8. When playing back, this VCR also automatically detects the tape speed (either SP or LP) the tape was recorded in.

Tape type	Recording format	Playback mode
Hi8 tape	Hi8 (high eight)	Hi8 (high eight)
Standard 8 tape	8 (standard 8 mm)	8 (standard 8 mm)

Saving a recording

Slide out the switch on the cassette so that the red colour appears.

To re-record on the cassette, slide the switch back.

Notes

- Hi8 recording or playback can only be done using a Hi8 tape.
- You cannot make Hi8 format recordings on standard 8 tapes.

Specifications

System

Channel coverage
PAL
UHF B21 to B69
RF output signal
UHF channels 28 to 55
Aerial out
75-ohm asymmetrical aerial socket

Inputs and outputs

LINE-1 (TV)
21-pin
Video input: pin 20
Audio input: pins 2 and 6
Video output: pin 19
Audio output: pins 1 and 3
LINE-3 IN
21-pin
Video input: pin 20
Audio input: pins 2 and 6
LINE-2 IN
S VIDEO, 4-pin mini DIN
Y: 1 Vp-p, 75 ohms, unbalanced, sync negative
C: 0.3 Vp-p, colour burst, 75 ohms, unbalanced
VIDEO IN, phono jack (1)
Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
AUDIO IN, phone jack (2)
Input level: 327 mVrms
Input impedance: more than 47 kilohms
LINE OUT
S VIDEO, 4-pin mini DIN
Y: 1 Vp-p, 75 ohms, unbalanced, sync negative
C: 0.3 Vp-p, colour burst, 75 ohms, unbalanced
VIDEO OUT, phono jack (1)
Output signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
AUDIO OUT, phone jack (2)
Standard output level: 327 mVrms
Load impedance: 47 kilohms
Output impedance: less than 10 kilohms

General

Power requirements
220 – 240 V AC, 50 Hz
Power consumption
37 W
Operating temperature
5°C to 40°C
Storage temperature
–20°C to 60°C
Dimensions
Approx. 430 x 109 x 387 mm (w/h/d) including projecting parts and controls
Mass
Approx. 7.2 kg

Supplied accessories

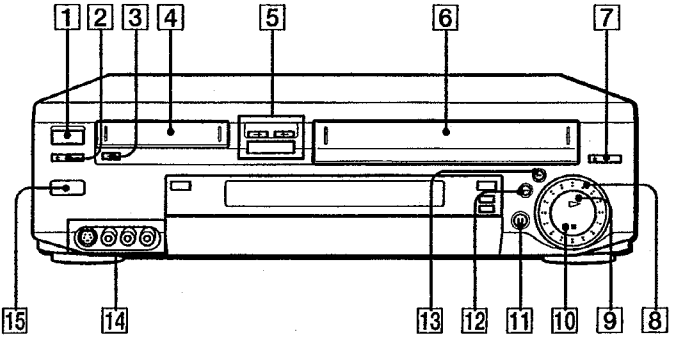
Remote commander (1)
R6 (size AA) batteries (2)
Aerial cable (1)
Audio /video cable (1)
S-video cable (1)
Mains lead (1)
LINE IN jack cover (1)

Design and specifications are subject to change without notice.

Index to parts and controls

Refer to the pages indicated in parentheses ( ) for details.

Front panel



1 ON/STANDBY switch/indicator (12)

2 8 mm ⏏ EJECT button (30)

3 ◀◀◀ High speed rewind Video8 button (30)

4 8 mm tape compartment

5 DUBBING/Video8 ⇨/⇦ VHS buttons (52)

6 VHS tape compartment

7 VHS ⏏ EJECT button (30)

8 CLICK SHUTTLE ring (42)

9 ▷ PLAY button (29)

10 ■ STOP button (30)

11 ❚❚ PAUSE button (30)

12 ◀◀ REW button (30)

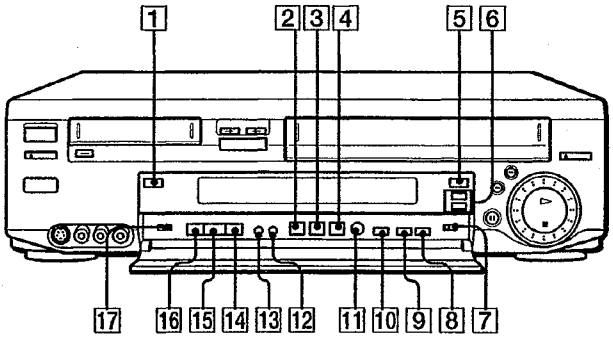
13 ▶▶ FF button (30)

14 LINE-2 IN VIDEO/AUDIO L/R jacks (57)
LINE-2 S VIDEO connector (57)

15 Remote sensor (5)

continued

Front panel, with cover opened



1 Video8 button (29)

2 TV/VTR button

3 AUDIO DUB (VHS) button (55)

4 COUNTER RESET button (30)

5 VHS button (29)

6 PROGRAM +/– buttons (13)

7 TAPE SELECT switch (VHS deck only) (32)

8 REC button

9 TIMER REC (ON/OFF) button (36)

10 QUICK TIMER button (43)

11 TAPE SPEED SP /LP (VHS) button (32)

12 RF-CH button (12)

13 EASY SET UP button (14)

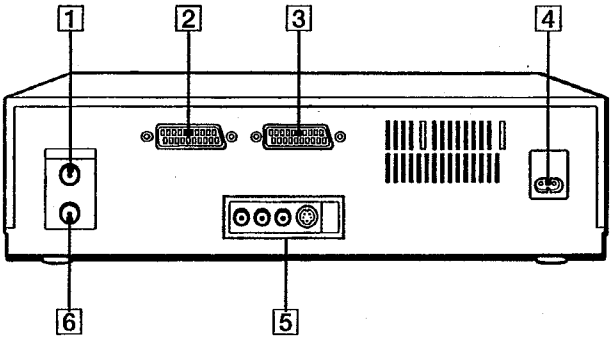
14 EDIT STOP button (54)

15 EDIT STANDBY / START button (53)

16 EDIT ON (DIR) / OFF button (53)

17 COMMAND MODE switch (12)

Rear panel



1 AERIAL OUT connector (9)

2 ⇨ LINE-1 (TV) connector (10)

3 ⇦ LINE-3 IN connector (34)

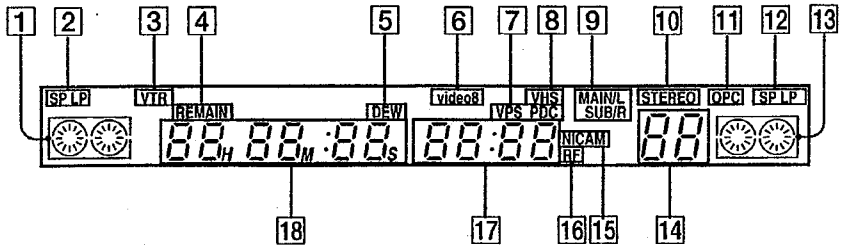
4 AC IN connector (9)

5 LINE OUT AUDIO / VIDEO jacks (10)
LINE OUT S VIDEO connector (10)

6 AERIAL IN connector (9)

continued

Display window



1 8 mm tape indicator

2 8 mm tape speed indicator

3 VTR indicator

4 REMAIN indicator (32)

5 DEW indicator (60)

6 Video8 indicator

7 VPS/PDC indicator (40)

8 VHS indicator

9 MAIN/L/SUB/R indicator (46)

10 STEREO indicator (46)

11 OPC indicator (49)

12 VHS speed indicator (32)

13 VHS tape indicator

14 Channel indicator (31)

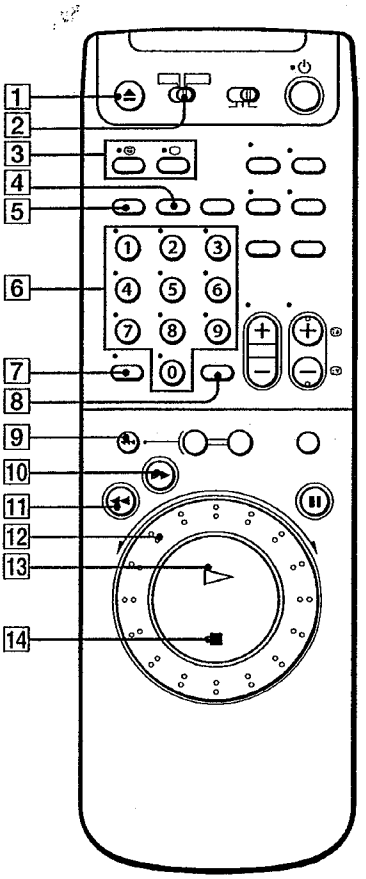
15 NICAM indicator (46)

16 RF indicator (12)

17 Clock/quick timer remaining time (43)

18 Time counter/clock (30)

Remote commander



1 ⏏ EJECT button (30)

2 TV / VIDEO remote control switch (5)

3 TV Teletext buttons (6)

4 COUNTER RESET button (30)

5 TAPE RETURN button (30)

6 Programme number buttons (6, 35)

7 -/-- (ten's digit) button (6, 34)

8 SET button (36)

9 ◀◀◀ HI-SPEED REW (Video8) button (29)

10 ▶▶ FF button (30)

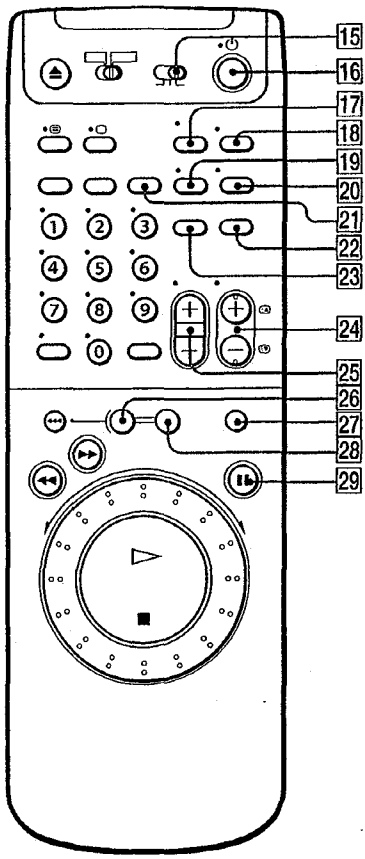
11 ◀◀ REW button (30)

12 CLICK SHUTTLE ring (42)

13 ▷ PLAY button (29)

14 ■ STOP button (30)

continued



15 COMMAND MODE switch (7)

16 ⏻ (on/standby) switch (6)

17 AUDIO MONITOR button (6, 46)

18 DISPLAY button (6)

19 WIDE button *(for TV)*(8)

20 TV/VIDEO button (6)

21 COUNTER / REMAIN button (32)

22 INPUT SELECT button (34, 55)

23 VIDEO Plus+ button (35)

24 PROG +/– buttons (6, 13)

▤▲/▤▼ Teletext page access buttons *(for TV)*

25 VOL +/– buttons *(for TV)* (6)

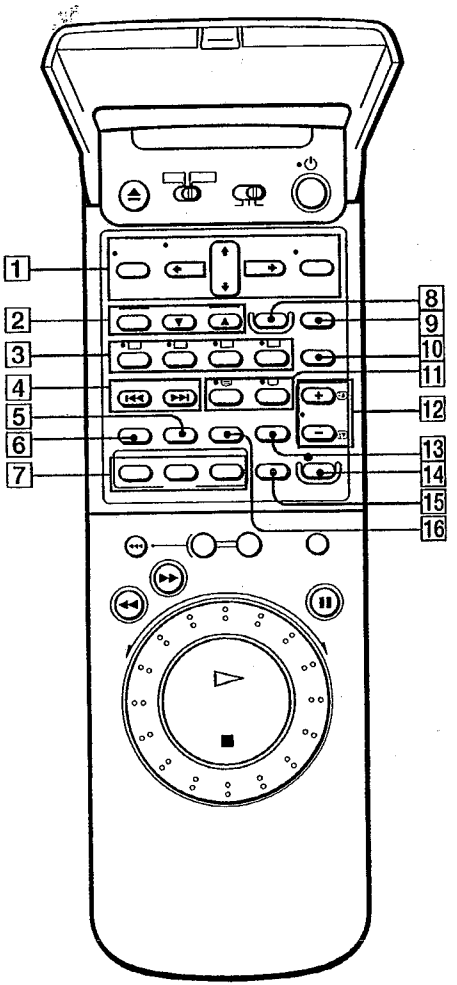
26 Video8 button (29)

27 SKIP button (41)

28 VHS button (29)

29 ❚❚ PAUSE button (30)

Remote commander (In the lid)



1 Menu buttons (6, 50)

MENU button
CURSOR ↑/↓/←/→ buttons
EXECUTE button

2 ▼/▲ TRACKING AUTO/MANU (VHS) buttons (VHS deck only) (49)

3 FASTEXT buttons (6)

4 ⏮ /⏭ INDEX SEARCH buttons (48)

5 COUNTER RESET button (30)

6 TAPE RETURN button (30)

7 EDIT buttons (53)

ON (DIR) / OFF button
STANDBY / START button
STOP button

8 TIMER REC ON /OFF button (36)

9 TIMER CLEAR button (36)

10 AUDIO DUB (VHS) button (55)

11 TV Teletext buttons (6)

12 PROG +/– buttons (6)

Teletext page access buttons *(for TV)*

13 INPUT SELECT button (34, 55)

14 ● REC button (32)

15 TAPE SPEED SP/LP (VHS) button (32)

16 COUNTER / REMAIN button (32)

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